OTCR Reporting File Template and Submission Process Flow

July 2022

Contents

Revision History

Version	Date	Synopsis
1.0	22 July 2022	First issue

Introduction

1. This document should be read in conjunction with the OTCR Technical Information Paper.

2. As mentioned in the OTCR Technical Information Paper, an OTCR Reporting File Template (the Template) will be provided to facilitate manual preparation of the OTCRRPT input file. This document aims to demonstrate how the Template could be used.   Process flow of the two file submission channels are also illustrated.

3. Relevant Regulated Intermediaries (RRIs) are advised to read this document carefully and use the examples as reference for adopting to the reporting requirements.

Report template and samples

OTCR Reporting File Template

4. The Template in the published name of "OTCR_template_to_txt.xlsx", subject to updates from time to time, can be downloaded from the WINGS Platform when the OTCR WebApp is released to facilitate manual preparation of the OTCR Reporting File. RRIs are advised to check the WINGS Platform in due course for updates and use the latest Template version for submitting the reports.

Name of template	Microsoft Excel file
OTCR Reporting File Template (OTCR_template_to_txt.xlsx)	OTCR_template_to_txt.xlsx

5. Colour codes are used in the Template to define mandatory, conditional, and non-required fields for specific actions and conditions. The colour codes are here to assist RRIs to report under the OTCR by manual input more conveniently and are not meant to replace the specification prescribed in the section of _OTCR Reporting File data format_ under the OTCR Technical Information Paper.

6. The sample screenshots depicted below show examples of the Add (A), Edit (E) and Delete (D) actions. By selecting the corresponding action type under the "Action" column, the respective cells that require mandatory input according to the data format specification will change to yellow colour while conditional fields will remain in white colour.

    e.g. Add (A) and Edit (E) actions:

7. Cells that are not required under the action Delete (D) will change to grey colour as depicted in sample screenshots below:

e.g. Delete (D) action:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Transaction ID	Action	Type of transaction	Stock Code	Currency Code of the transaction price	Transaction price per share	Number of shares transferred	Number of shares in the transaction	Number of shares in the deposit / withdrawal	Total number of CID	Share transfer date	Share transaction date	Deposit / Withdrawal date	CE number of Relevant Regulated Intermediary	Role of Relevant Regulated Intermediary in the share transfer
2		D													
3															

	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1	CE number of the counterparty corporation	CID (full name) of the transferor	CID (identity document's issuing country or jurisdiction) of the transferor	CID (identity document type) of the transferor	CID (identity document number) of the transferor	CID (full name) of the transferee	CID (identity document's issuing country or jurisdiction) of the transferee	CID (identity document type) of the transferee	CID (identity document number) of the transferee	CID (full name) of the deposit / withdrawal	CID (identity document's issuing country or jurisdiction) of the deposit / withdrawal party	CID (identity document type) of the deposit / withdrawal party	CID (identity document number) of the deposit / withdrawal party
2													
3													

Colour legend: ▨ *Mandatory field*; ▨ *Non-required field*; ▢ *Conditional field*

8.   The below screenshot shows an example of the Unicode Text output from the Template:

Sample scenarios

9. Under the OTCR Technical Information Paper, there are 5 sample scenarios and the relevant sample files in Unicode Text (i.e. .txt) have been provided. In this document, sample files in Excel using the Template for these 5 sample scenarios are further provided below for reference purpose.
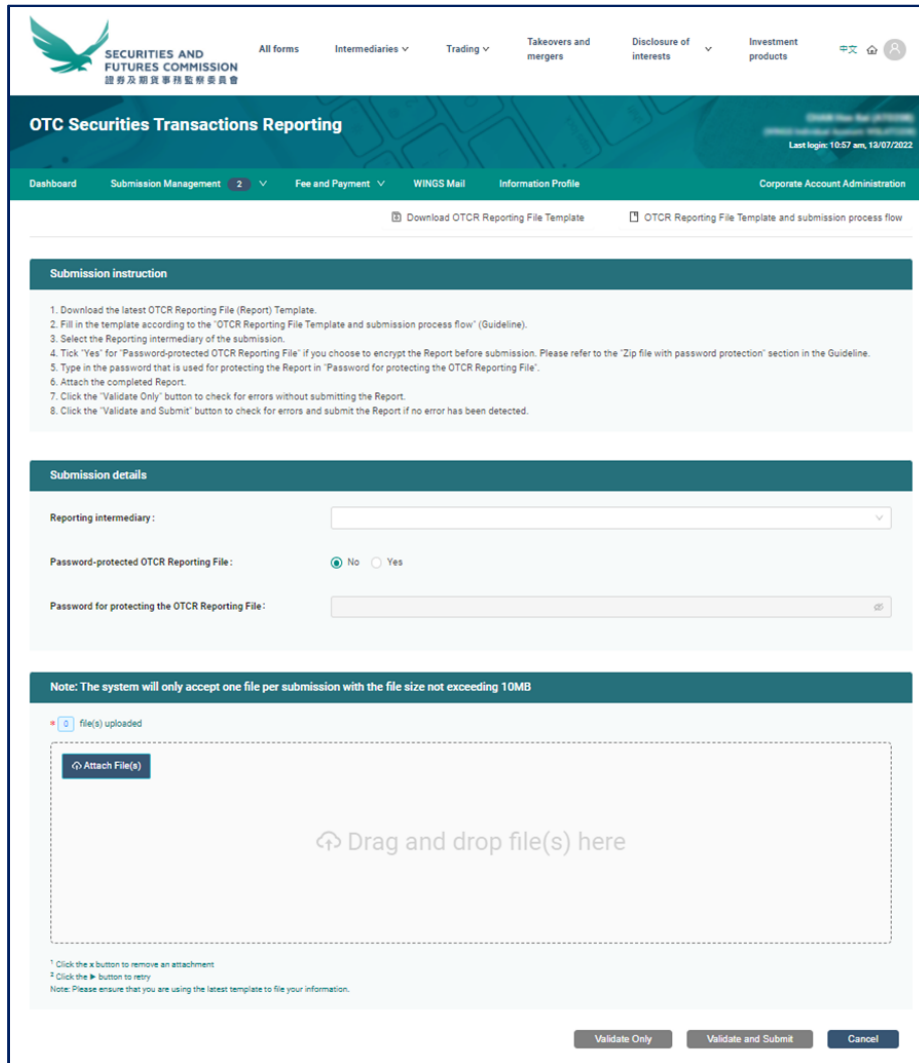
Sample scenarios in the OTCR Technical Information Paper	Sample Excel
Scenario 1:	1T-1TR-1TE.xlsx
Scenario 2:	1T-1TR-3TE.xlsx
Scenario 3:	1T-2TR-3TE.xlsx
Scenario 4:	1T-3D.xlsx
Scenario 5:	1T-3W.xlsx

Conversion of the Template into Unicode Text format

10. The Template's data must be converted into Unicode Text format before submission. To ensure the encoding of non-English characters are correctly represented in the OTCRRPT input file, please follow the step-by-step guide below for converting the Template's data into a Unicode Text formatted OTCRRPT input file:

a. Step 1 – Input the transaction data using the Template:

b. Step 2 – Save the content into Unicode Text file

- Select File

- Save As -> Browse

- Save as type: Unicode Text -> Save

Submission channels

11. As mentioned in the OTCR Technical Information Paper, the OTCRRPT input file has to be submitted via the WINGS platform through any of the two data transmission channels, the OTCR WebApp and OTCR SFTP. Process flow relating to these channels are set out below.

12. OTCR WebApp submission channel

    a. The OTCR WebApp is the manual submission channel for reporting under the OTCR. Responsible officers and delegates of RRI (collectively referred to as "Submitter") with authority to report under the OTCR on behalf of the firm can logon to the WINGS platform with the Submitter's self-registered WINGS User Account and attach the OTCRRPT input file for reporting purpose.

    b. This channel provides an option for the Submitter to submit an encrypted OTCRRPT (Protected OTCRRPT) input file by means of compressing and password protecting the file using the 7-Zip (or compatible) software before attaching the encrypted file for submission.

    c. The process flow diagram shown below illustrates the basic steps on how the manual submission is done:
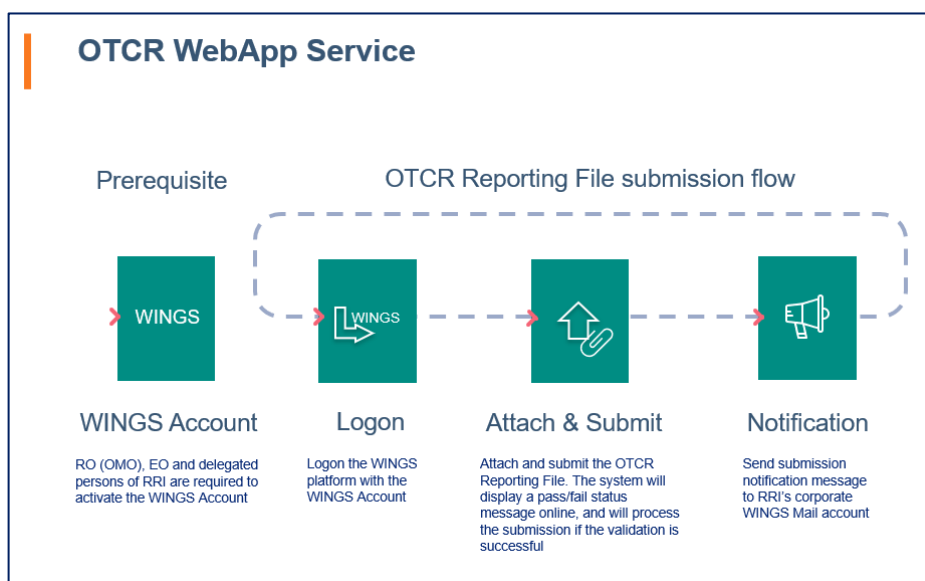
   d. The OTCR WebApp user-interface is shown below as a reference to illustrate the manual submission process:

e. Submitter electing to submit a Protected OTCRRPT input file (i.e. by checking the "Password-protected OTCR Reporting File" option) would also need to enter the password used to encrypt the Protected OTCRRPT input file for the submission system to carry out the decipherment (i.e. by typing in the password in the "Password for protecting the OTCR Reporting File" field). To learn more about how to zip a file, please refer to the section "*Zip file with password protection (Applicable to OTCR WebApp only)*".

f. The OTCR WebApp is designed to display a response message immediately after the submission has been processed informing the Submitter whether the OTCRRPT input file has passed or failed the validation. A notification showing the submission reference will <u>only</u> be sent to the RRI's WINGS Mail inbox when the submission is successful. If any part of the file fails to pass the validation, the errors will be shown on screen. Please refer to paragraph 13(j) for the list of error messages.

g. The submission file should be either in .txt or .zip format with size not larger than 10MB.

Important note: the conceptual design of the OTCR WebApp shown above is a work-in-progress prototype and may be subject to further changes.

13. OTCR SFTP submission channel

   a. The OTCR SFTP is the automated machine-to-machine submission channel for reporting under the OTCR. RRI seeking automation for the submission process can do so by sending in an application for enrolling the service (Procedure for the service enrolment application will be announced in due course).

   b. The process flow diagram shown below illustrates the high level flow on how the automation submission is done:
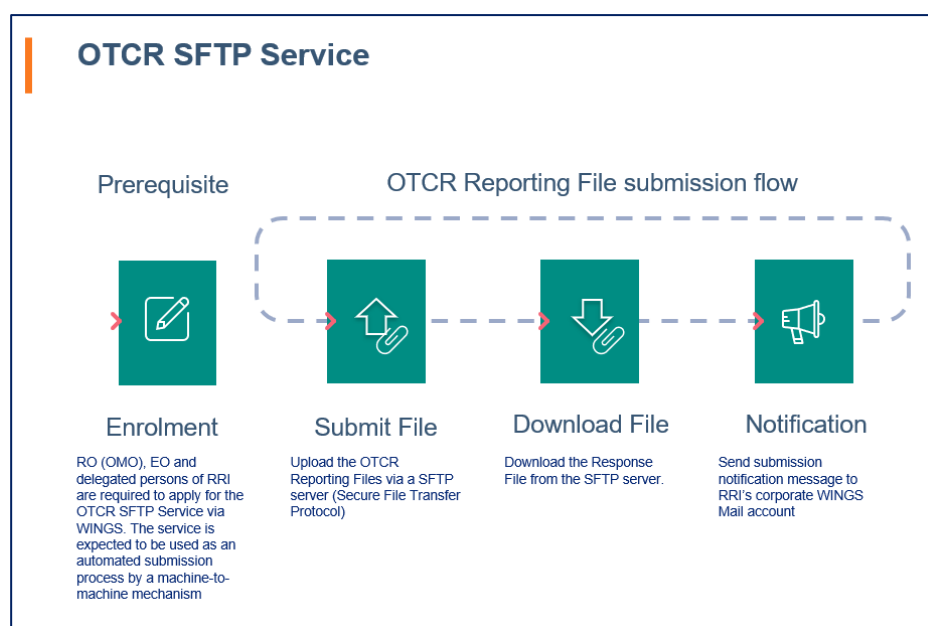
   c. RRI opting for the automation submission approach will need to develop its own computer program and infrastructure setup (including the provisioning of a SFTP client software) at its own expenses for connecting and fully utilising the OTCR SFTP submission channel.

   d. For the preparation of implementing the OTCR SFTP submission channel, the RRI is expected to generate a SSH (Secure Shell) cryptography key pair (i.e. a private key and a public key) and provide the public key to the SFC during the service enrolment application process. The public key is used for encrypting the data sent over the Internet.

   e. The recommended encryption ciphers for generating the SSH key pair are specified in the below table:

SSH key pair format	
Key type:	RSA-2048

   f. The configuration of the client SFTP software for the OTCRRPT input file submission and logon information are specified below:

SFTP logon information	
Host name and Port:	*To be provided by the SFC*
Logon type:	Key file
Username:	*To be provided by the SFC*
Key file:	*RRI's SSH private key*

g. A designated folder and folder path will be assigned to each RRI who has enrolled in the service for uploading the OTCRRPT input file.

Designated file upload path	
Path:	/submission

h. A corresponding OTCR Response File (Please refer to the section of *OTCR Response File* under the OTCR Technical Information Paper for details) for each submission will be generated and deposited in the designated folder for the RRI to download.

i. The OTCR Response File contains the summary and results of the corresponding submission including but not limited to the below information:

- Summary of the validation result
- Date and time of the submission
- Submission reference number (Only when the validation has passed)
- Error message(s) (Only when the validation has failed)

j.   List of error messages:

Error message	Remark *(Please refer to the Technical Information Paper for more details)*
File is not TXT	The file is not a text file (i.e. TXT).
File in ZIP is not TXT	The archive file in the ZIP is not a text file (i.e. TXT).
Invalid ZIP	The file is not in ZIP format.
ZIP file must contain exactly one file	ZIP file does not contain a valid OTCR Reporting File.
File is empty	OTCR Reporting File is empty.
Password incorrect	The password cannot decrypt the ZIP file.
Invalid filename format	The filename format of the OTCR Reporting File or the ZIP file is invalid.
Invalid filename format for file in ZIP	The filename format of the OTCR Reporting File extracted from the ZIP is invalid.
CEREF in filename does not match	The CE number in the OTCR Reporting File or the ZIP file does not match the selected "Reporting Intermediary".
Submission date in filename does not match	The submission date that forms part of the filename of the OTCR Reporting File or the ZIP file does not match the current date. *E.g. OTCRRPT + "_" + <CE no. of RRI> + "_" +* **<Submission date in YYYYMMDD>** *+ "_" + <No. of submission per submission day*> + ".txt"*
Submission no. in filename is not valid	The submission number is not valid.
ZIP is not encrypted	The ZIP file is not password protected.
Only ZIP is accepted when protected by password	If the option "Password-protected OTCR Reporting File" is "Yes", then the file being uploaded should be a ZIP file.
Invalid format	Invalid data format detected in the OTCR Reporting File.
Missing header "{header}"	The corresponding header label is invalid. e.g. Missing header "Transaction ID".
Invalid header order "{header}"	The ordering of the header is invalid. e.g. Invalid header order "Stock Code"
No record in file	No record is detected in the OTCR Reporting File.
Action is not valid for this transaction	The action is invalid (i.e. not "A", "E" or "D") for the transaction.
"{field_name}" is required	The mandatory field is missing in the row. e.g. "Stock Code" is required.
Invalid "{field_name}"	The input for the field failed to pass the validation rule. e.g. Invalid "Stock Code".
CE number of Relevant Regulated Intermediary does not match	The "CE number of Relevant Regulated Intermediary" in the OTCR Reporting File does not match the selected "Reporting Intermediary".
Duplicated Transaction ID	The combination of the transaction id and the action should be unique.

"{field_name}" is not allowed	The field should not contain any input. e.g. "Number of shares transferred" is not allowed.
CID record is not allowed for transaction to be deleted	CID related fields should not contain any input for the action "D" (i.e. Delete).
CID record is required	CID related fields should be filled.
CID of the transferor above is blank	The CID related fields of the transferor of a joint account in the previous row should be filled.
CID of the transferee above is blank	The CID related fields of the transferee of a joint account in the previous row should be filled.
Reporting file is more than 10MB	The OTCR Reporting File must be 10MB in size or less.
Max error count reached	Only the first 1,000 errors are shown.
System error. If this problem persists after retrying, please contact SFC. (Ref no.: {error_reference_no.})	Unexpected errors have been detected. e.g. System error. If this problem persists, please contact SFC. (Ref no.: 18RK2D)

k. Folder path for downloading the Response File:

Designated file download path	
Path:	/ackreceived

l. A notification containing the submission reference will be delivered to the RRI's WINGS Mail inbox.

m. The submission file size should not be larger than 10MB per file.

ZIP file with password protection (Applicable to OTCR WebApp only)

14. 7-Zip is free software with open source that could be used on any computer without registering or paying for it (https://www.7-zip.org/faq.html).

15. 7-Zip supports several different compression and non-compression archive formats, but the OTCR WebApp Service will only accept the ZIP format.

16. Please refer to the 7-zip.org website for software installation, licence, and other details.

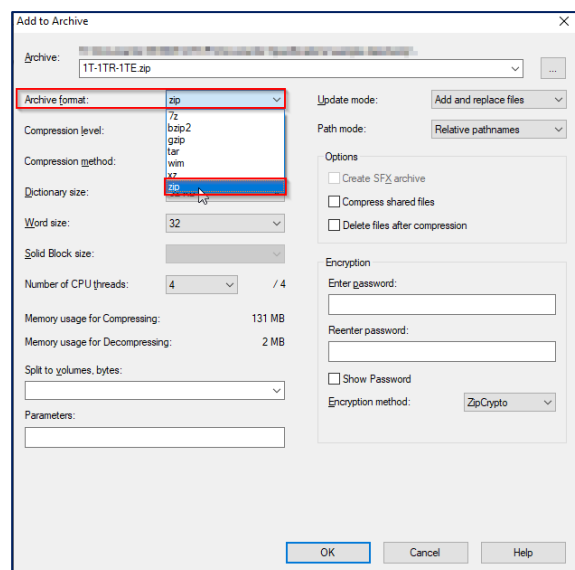Compress file with password protection by using 7-Zip

17. Step 1 – Archive

   ▪ In Microsoft Windows Explorer, select and right-click on the file you would like to put into a ZIP file.

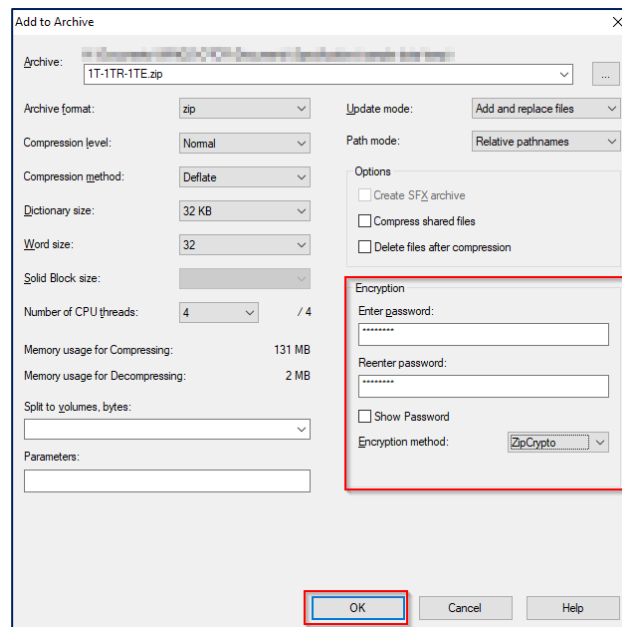   ▪ Select "7-Zip" -> "Add to archive…" from the menu.
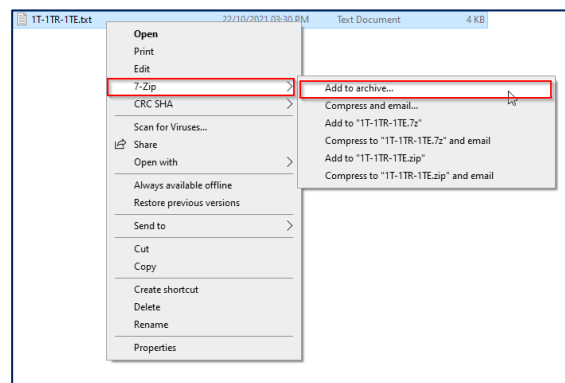
18. Step 2 – Select format

   ▪ Select "zip" for the "Archive format" option

19. Step 3 – Enter password

   ▪ In the Encryption section, enter and re-enter a password. Keep the "Encryption method:" as the default, i.e. "ZipCrypto". Click "OK" to create the password-protected ZIP file.

Guidelines for strong passwords

20. When considering an appropriate password for encrypting the OTCR reporting files, you should consider adopting the below best practice.

21. In choosing a strong password, the best practice suggests meeting a combination of three of the five complexity requirements below:

   ▪ Password should contain at least 8 characters and up to 128 characters.

   ▪ Contain at least one upper case letter, i.e. A through Z

   ▪ Contain at least one lower case letter, i.e. a through z

   ▪ Contain at least one base-10 digit, i.e. 0 through 9

   ▪ Contain at least one of the following special characters, i.e. ! @ # $ % ^ & * ( )